



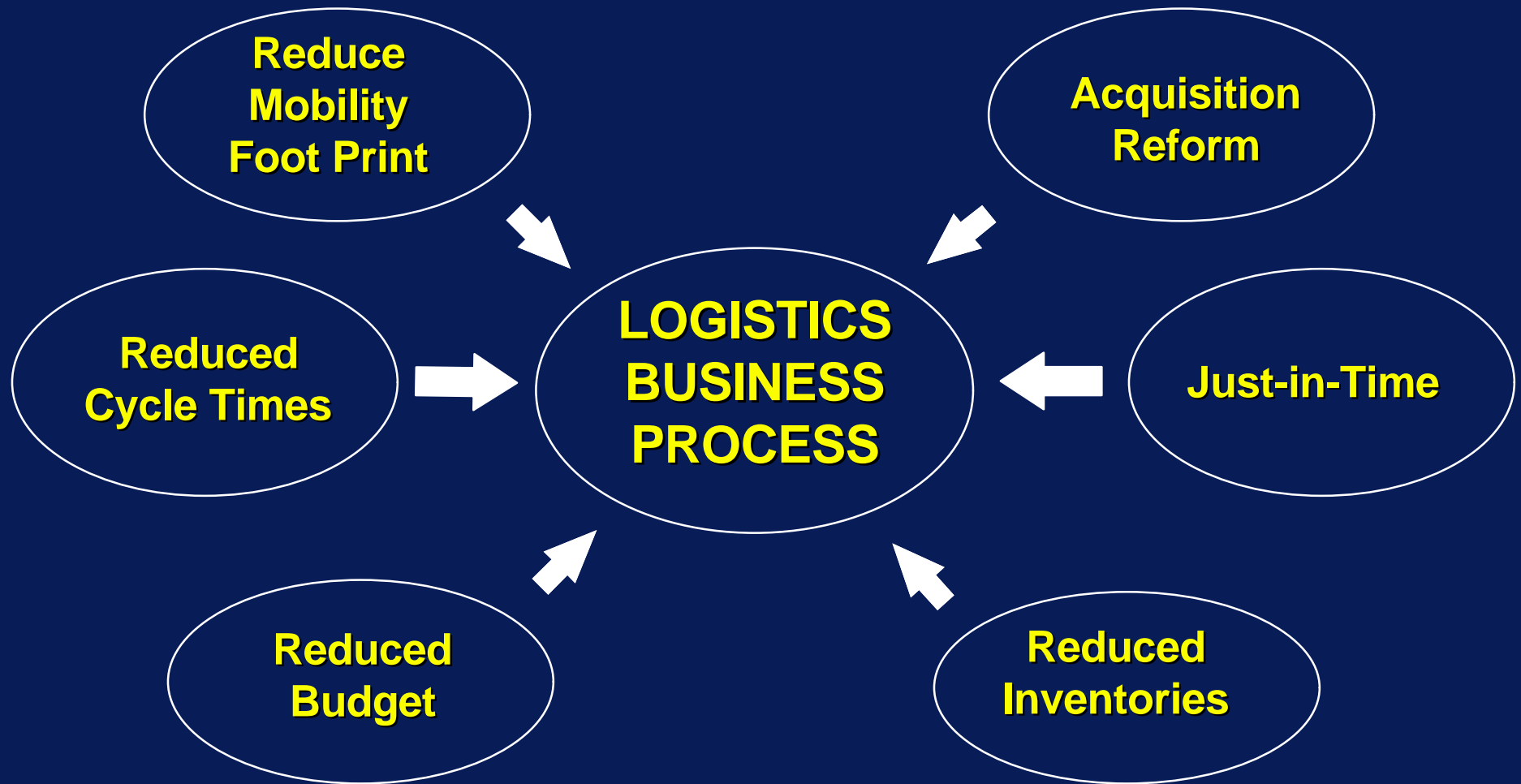
# AIR FORCE AGILE LOGISTICS

**Mr Tom H. Caudill**  
**Chief, Production Policy**  
**HQ AFMC/LGPP**  
**WPAFB, OH 45433-5006**

# OUTLINE

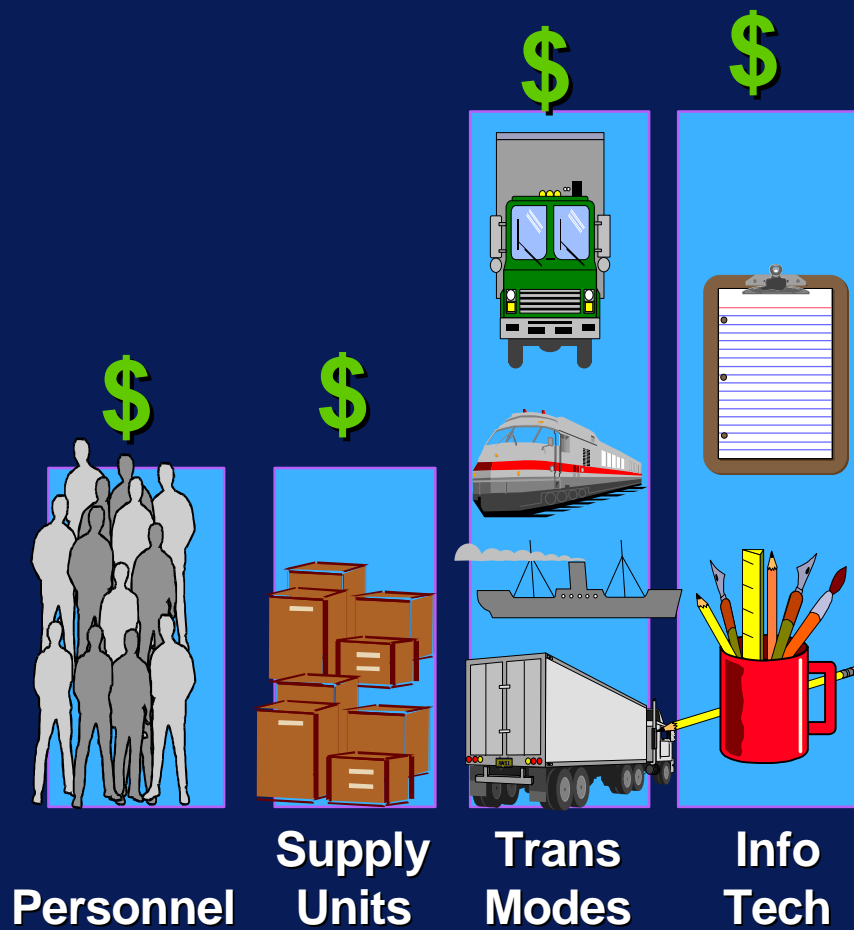
- **Reasons for Change**
- **Lean Logistics**
- **PACER LEAN/Depot Repair Enhancement Program (DREP)**
- **Other Repair Enhancement Programs**
  - **Contract Repair Enhancement Program (CREP)**
  - **Aircraft Repair Enhancement Program (AREP)**
- **Agile Logistics Objectives (FY2000-2005)**
- **Summary**
-

# REASONS FOR CHANGE

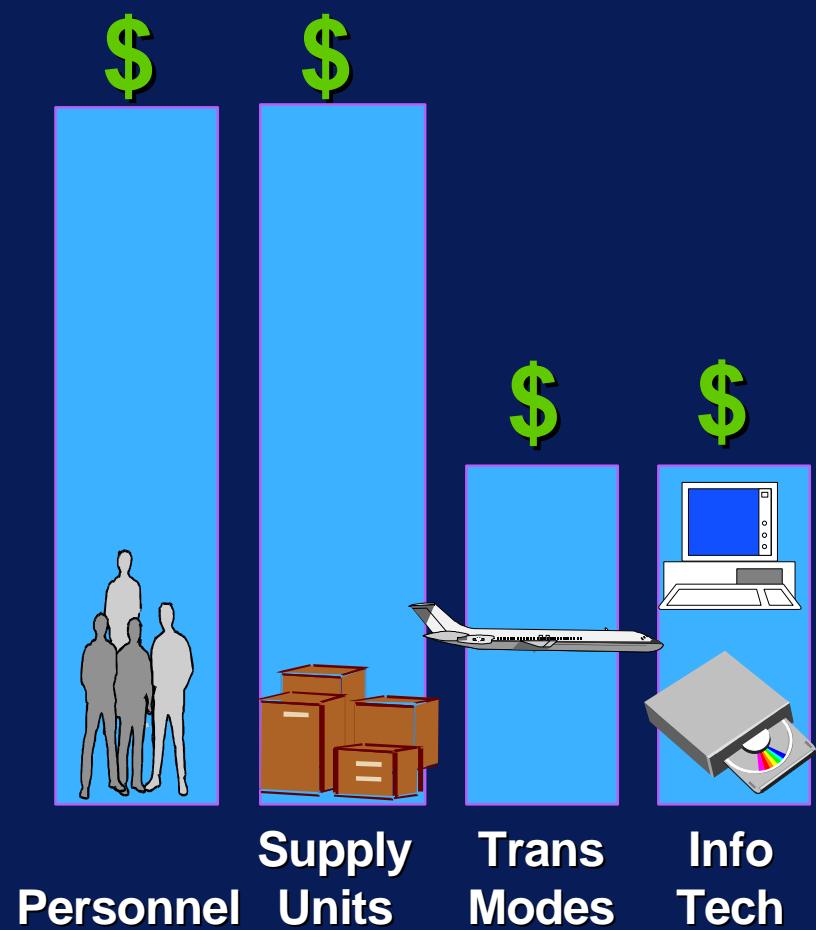


# REASONS FOR CHANGE

## PAST



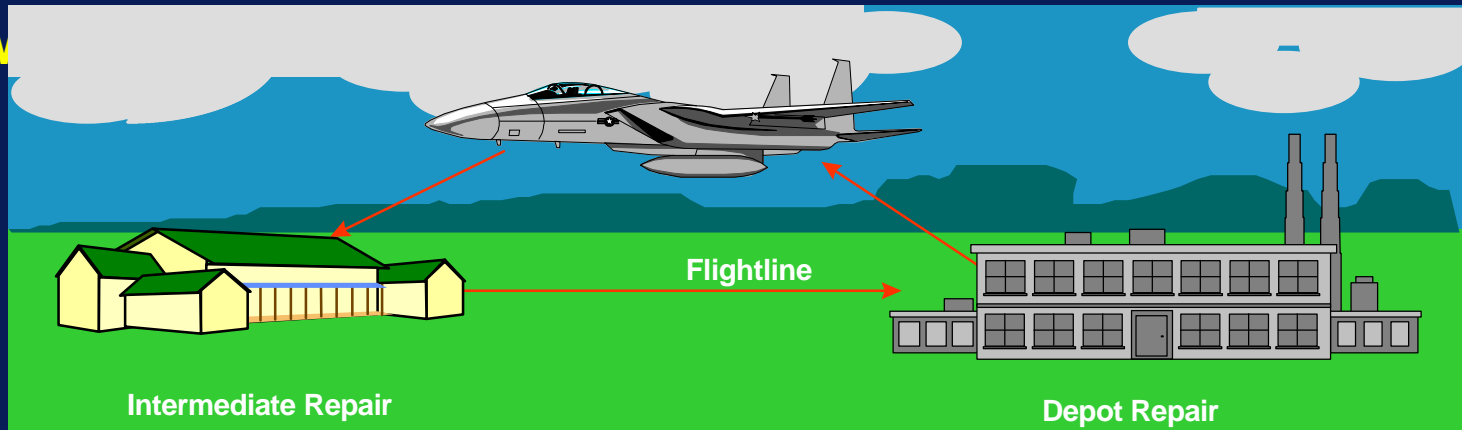
## PRESENT



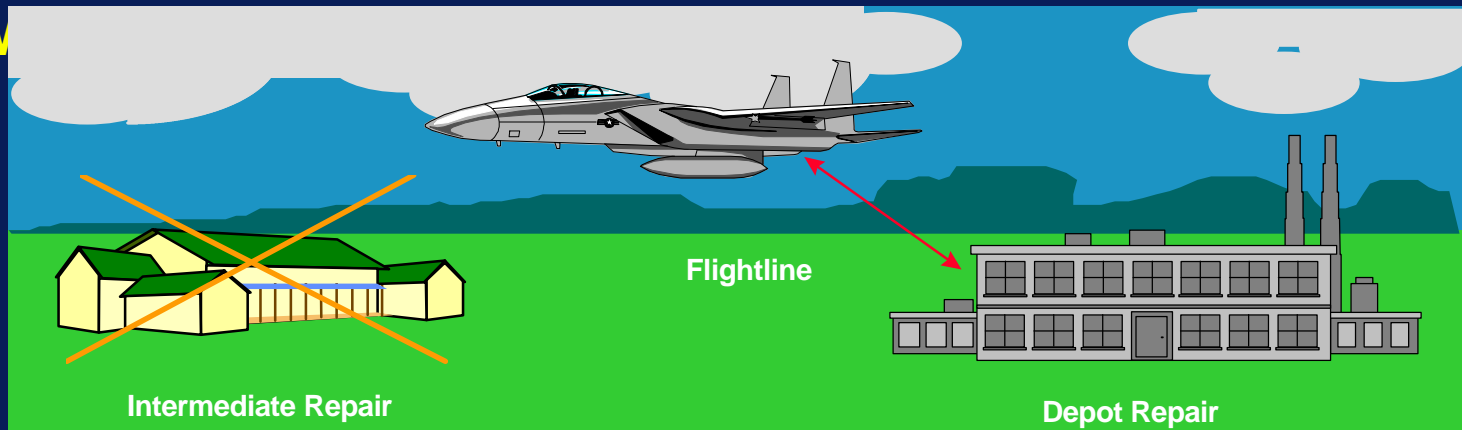
# LEAN LOGISTICS

## TWO LEVEL MAINTENANCE

3LM



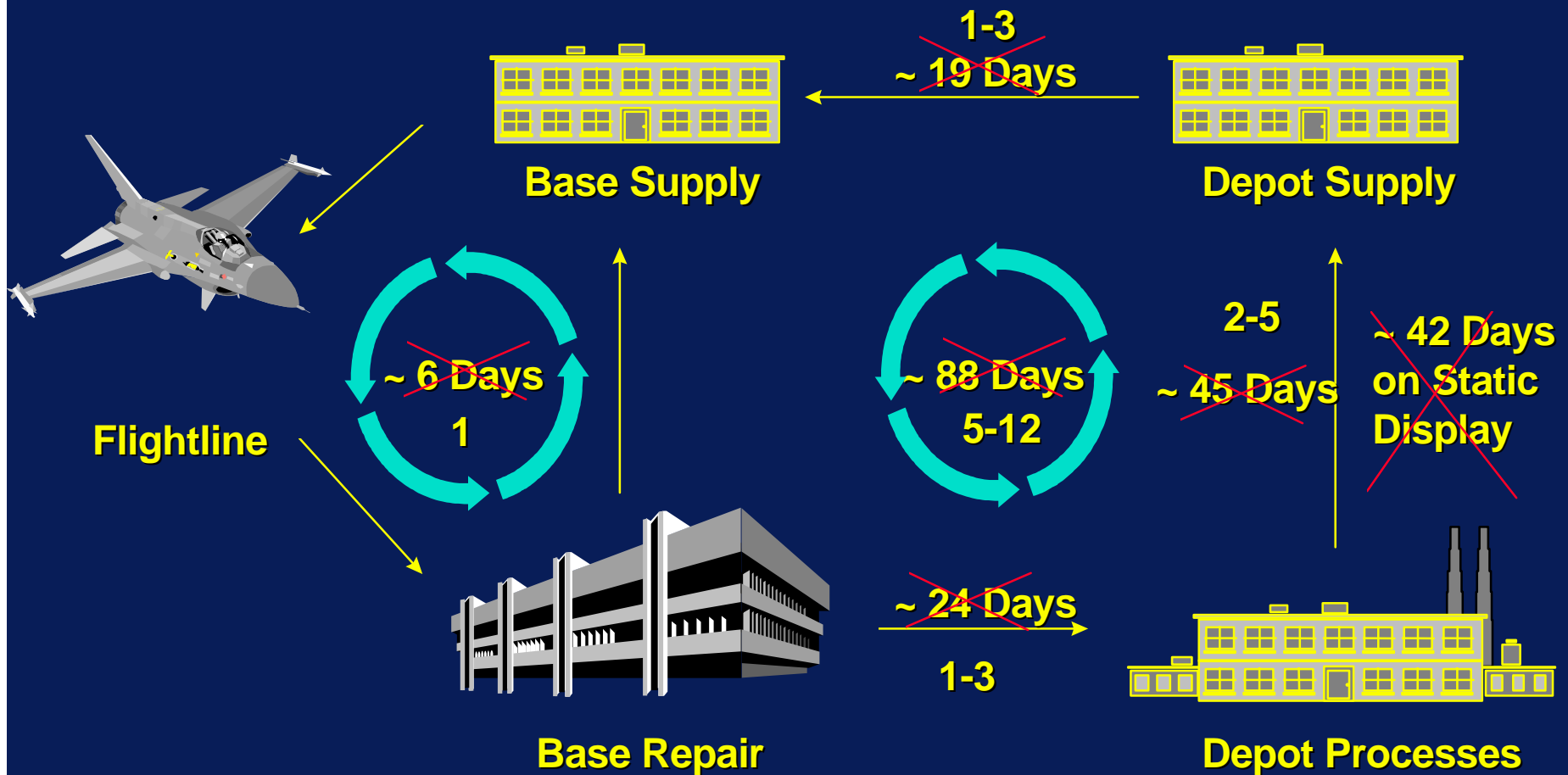
2LM



# LEAN LOGISTICS

## 2LM MAINTENANCE EFFICIENCIES

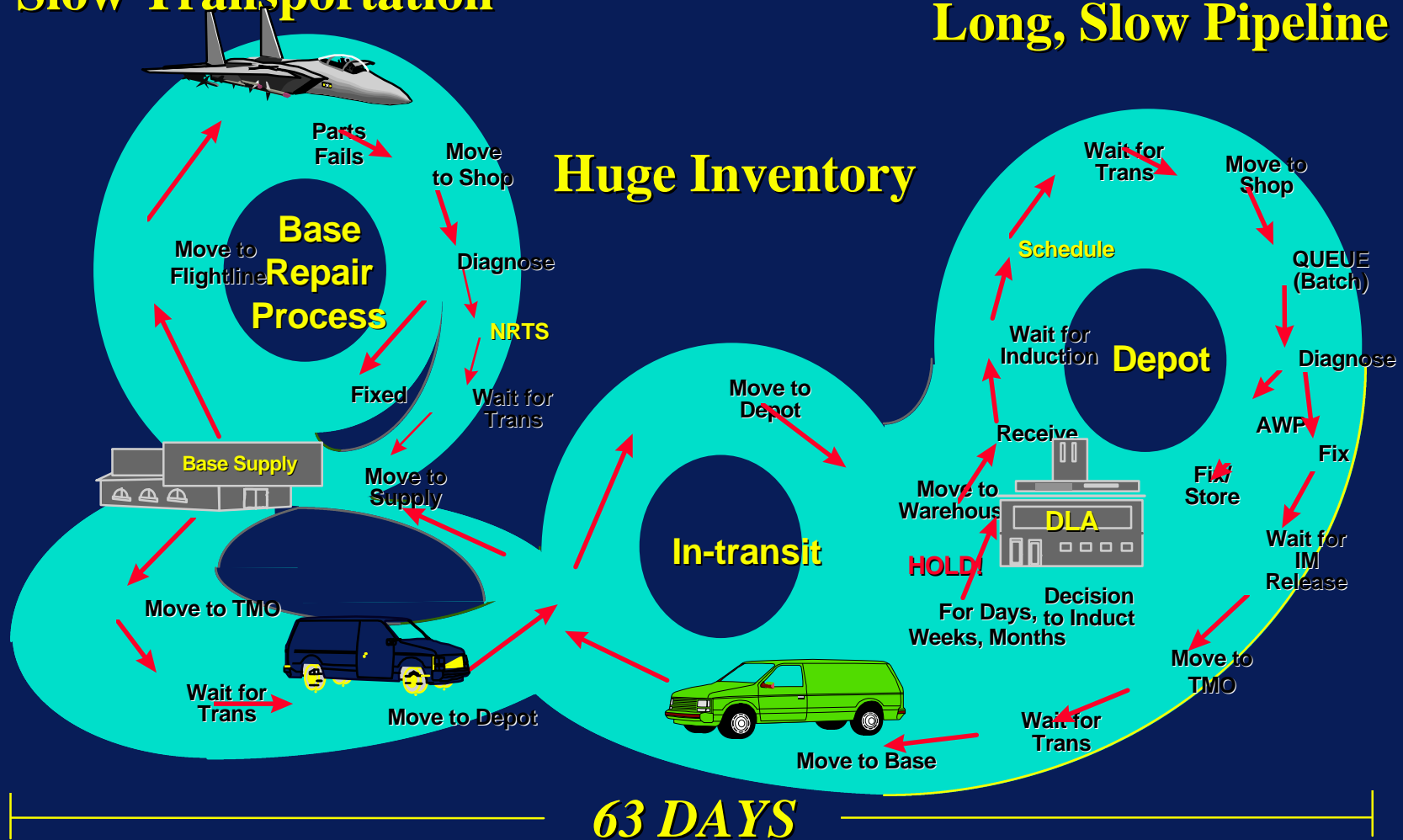
### Targets For Reduced Times



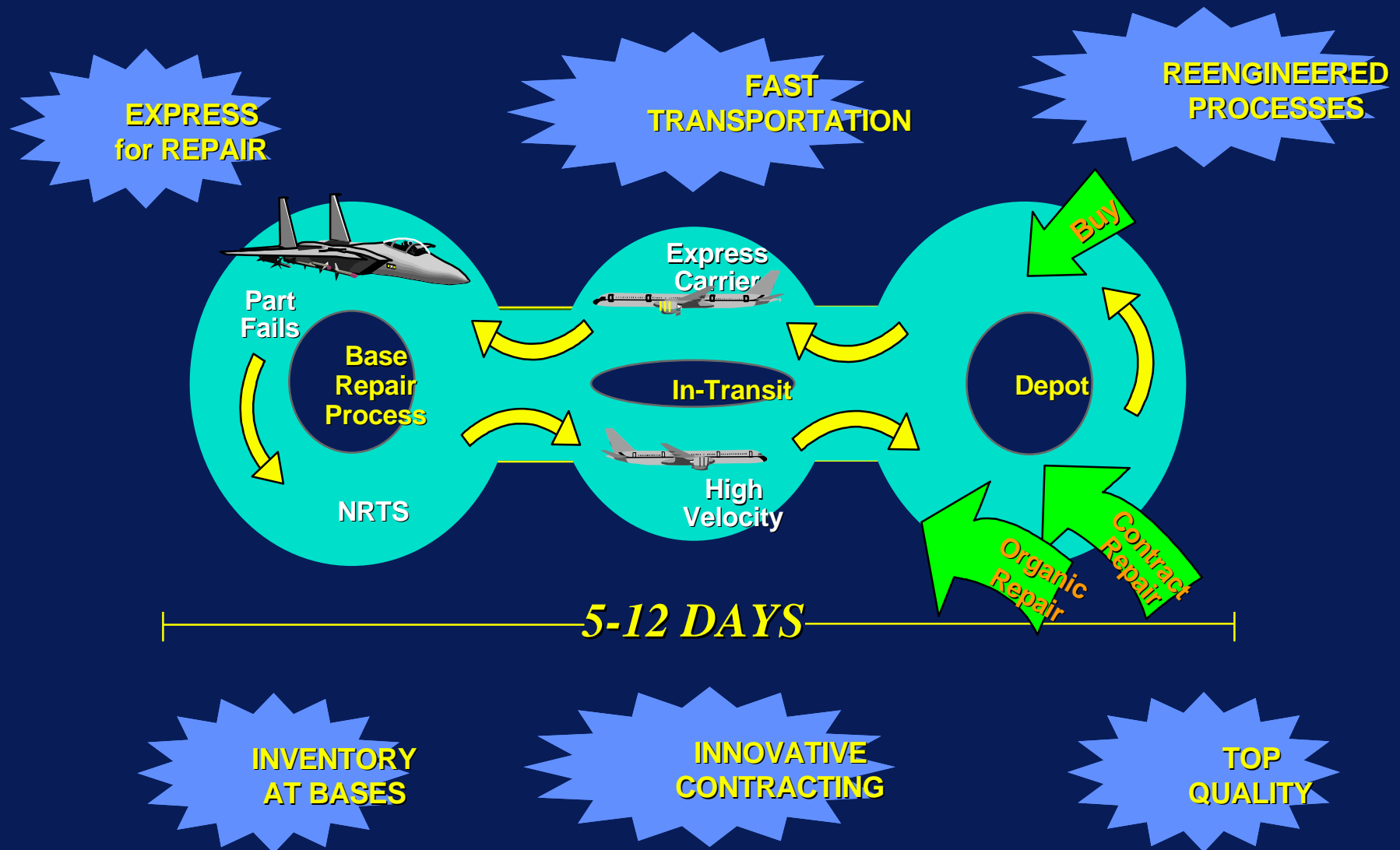
# LEAN LOGISTICS UNRESPONSIVE SYSTEM

## Slow Transportation

## Long, Slow Pipeline



# LEAN LOGISTICS KEY ELEMENTS





# LEAN LOGISTICS

## WHAT WE LEARNED

**No Readiness Based  
Prioritization of Repair**

**Weak Repair and  
Demand Connection**

**No Fixer  
Visibility of  
Requirement**

**Poor Parts  
Support to Repair**

**Need for  
Proactive  
Management**

**Lots of Delays  
and Wait Time**

**Need for Focused  
Organization**

**Focus on Busy Not  
Fixing the Right Things**

# PACER LEAN PILOT DREP PROGRAM

Improve Support - Provide Feedback  
Standardize Processes - Test/Analyze/Fix  
Configuration Control

## WR-ALC

E-3 Avionics - Jun 96  
C-130 Prop Shop - Aug 96

## SM-ALC

HSI - Jul 96  
Nav Aid - Sep 96

## SA-ALC

Exciter Shop - Jul 96  
Secondary Power Systems - Sep 96

## OO-ALC

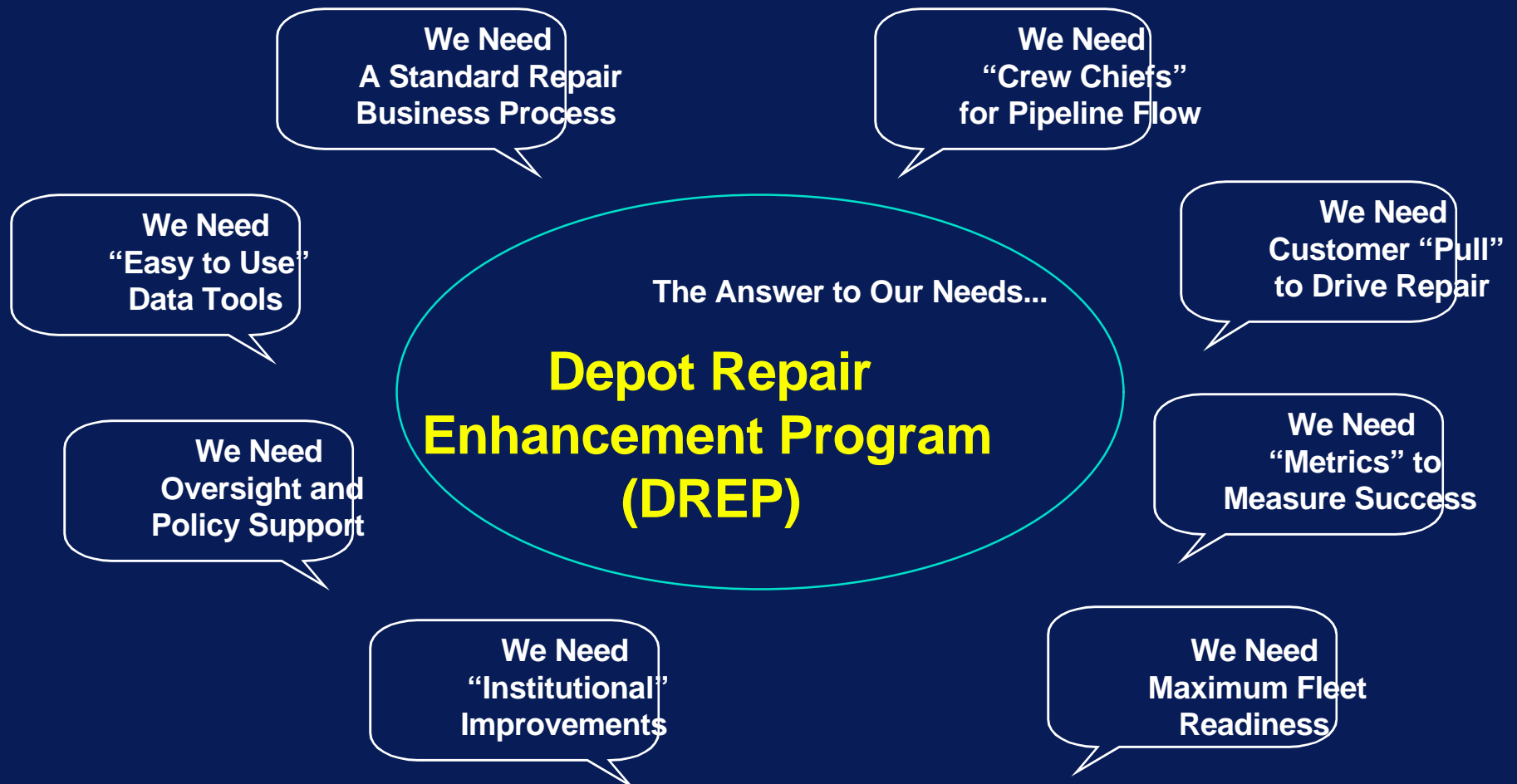
F-16 Avionics - Jul 96  
F-16 EPU - Aug 96

## OC-ALC

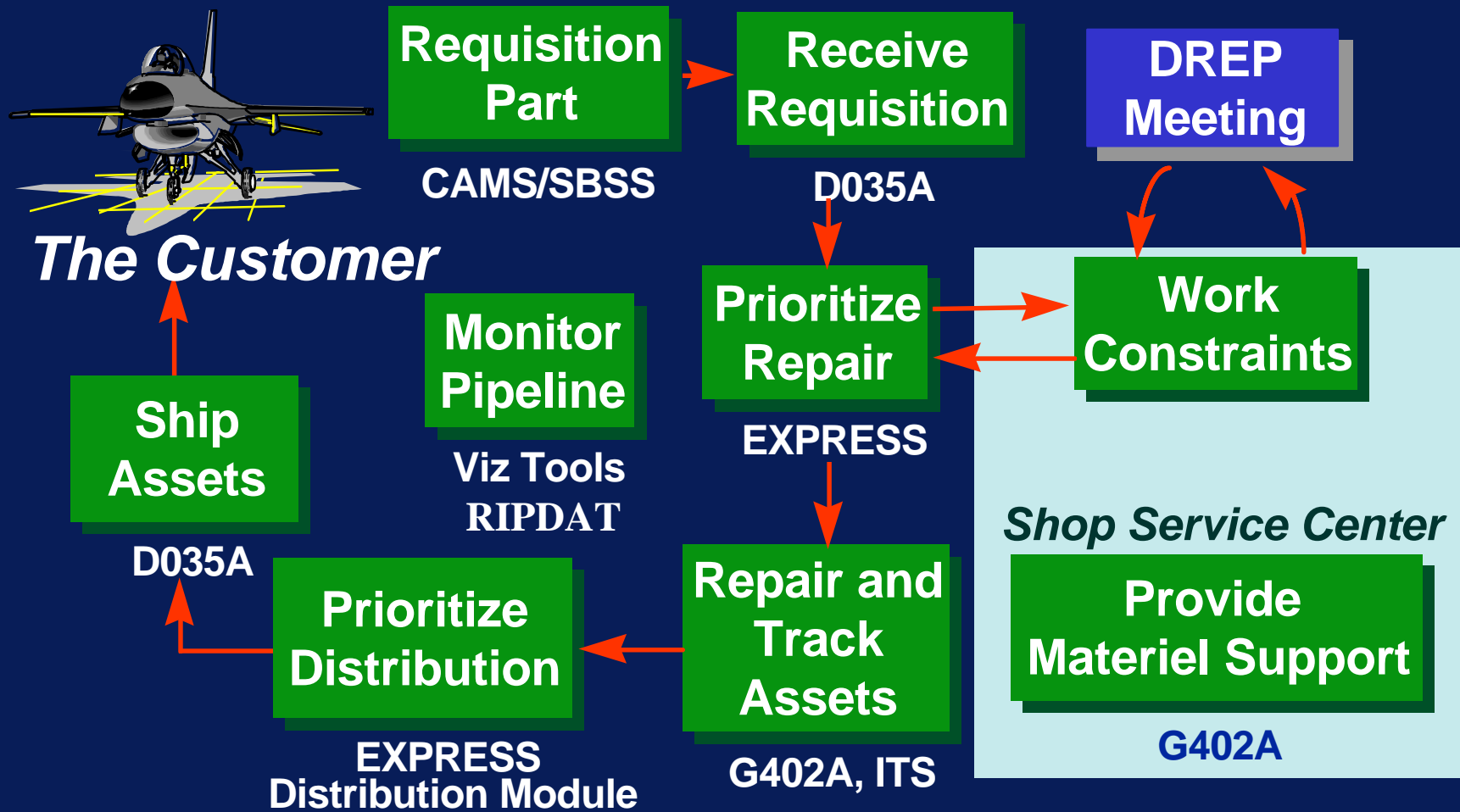
Common Avionics - Jul 96  
Oxygen Shop - Sep 96

# PACER LEAN

## Two Level Maintenance and Lean Logistics Showed Improvement but...

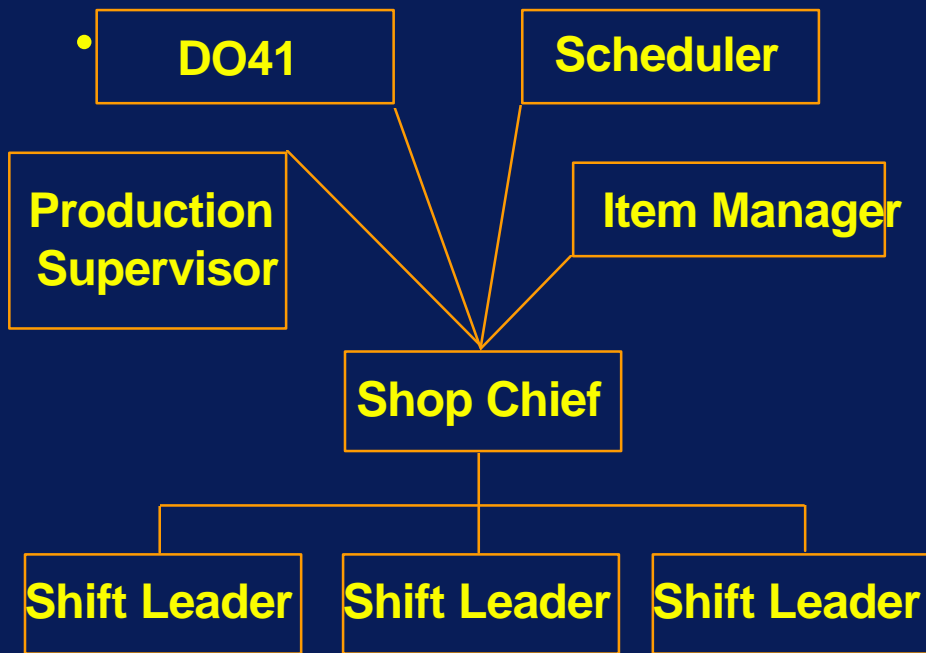


# PACER LEAN DREP PROCESS



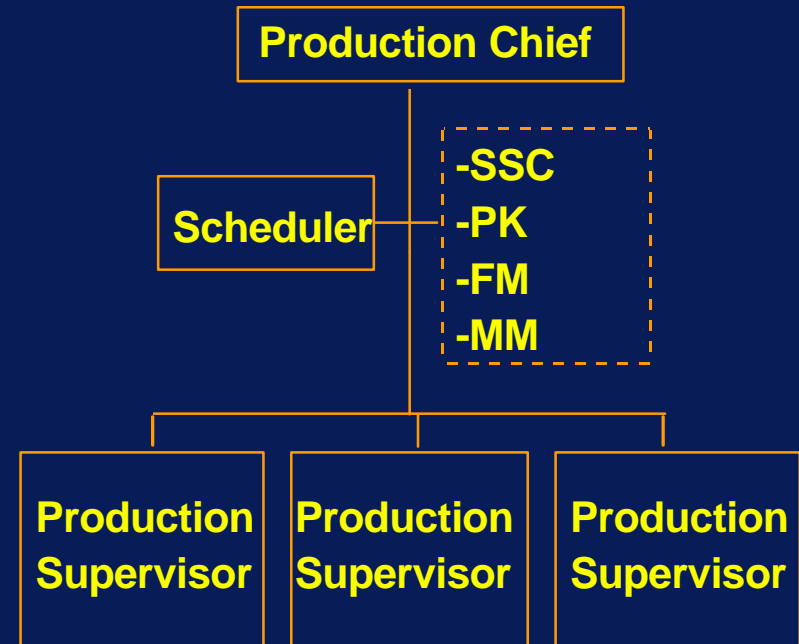
# PACER LEAN DREP SHOP ORGANIZATION

## • “WAS...”



- FUNCTIONAL ORIENTATION
- Fixers Often Left Waiting

## “IS...”



- PRODUCTION ORIENTATION
- One Team, One Boss... In Charge

•

# DREP - KEY COMPONENTS

Fixer  
Throughput Crewchief

Materiel Manager  
Logistics Process  
Quarterback

Shop Service Center (SSC)  
Provides Support to Technician

Readiness Based  
Leveling (RBL)  
Evens Constrained  
Parts

Contract Repair  
Enhancement Program (CREP)  
Manages Contract Repair

## Automated Tools

**PARTS PRO**  
Sets SSC Levels  
Analyze Inventory Levels

**EXPRESS**  
Prioritize Repair  
and Shipment

**SHOP PRO**  
Identify Constraints

# **PACER LEAN DREP RESULTS**

- **MIICAP Incidents reduced by 18 Percent**
- **MIICAP Hours Reduced by 20 Percent**
- **Number of Items On-Work-Order Reduced by 24 Percent**
- **Items Awaiting Parts Did Not Increase**

# PACER LEAN “VIZ” TOOLS

- **EXPRESS**

- Determines Repair Execution Requirements on a Daily Bases by Triggering Funding Needs in JO25A
- Generates Prioritized Listing of Repair Requirements by Sub-group Master
  - Validates in Supportability Module
- Checks for Carcass, Capacity, Parts and Funding

- **PARTS PRO**

- Analyzes Inventory Levels for the Shop Service Center

- **SHOP PRO**

- Identifies Constraints



# CONTRACT REPAIR ENHANCEMENT PROGRAM (CREP)

## Mirror DREP in Contract Repair

**Implement Lean Logistics - Apply Acquisition Reform**

## Improve Support

**Faster Response - Reduced Cycle Time - Minimize Costs**

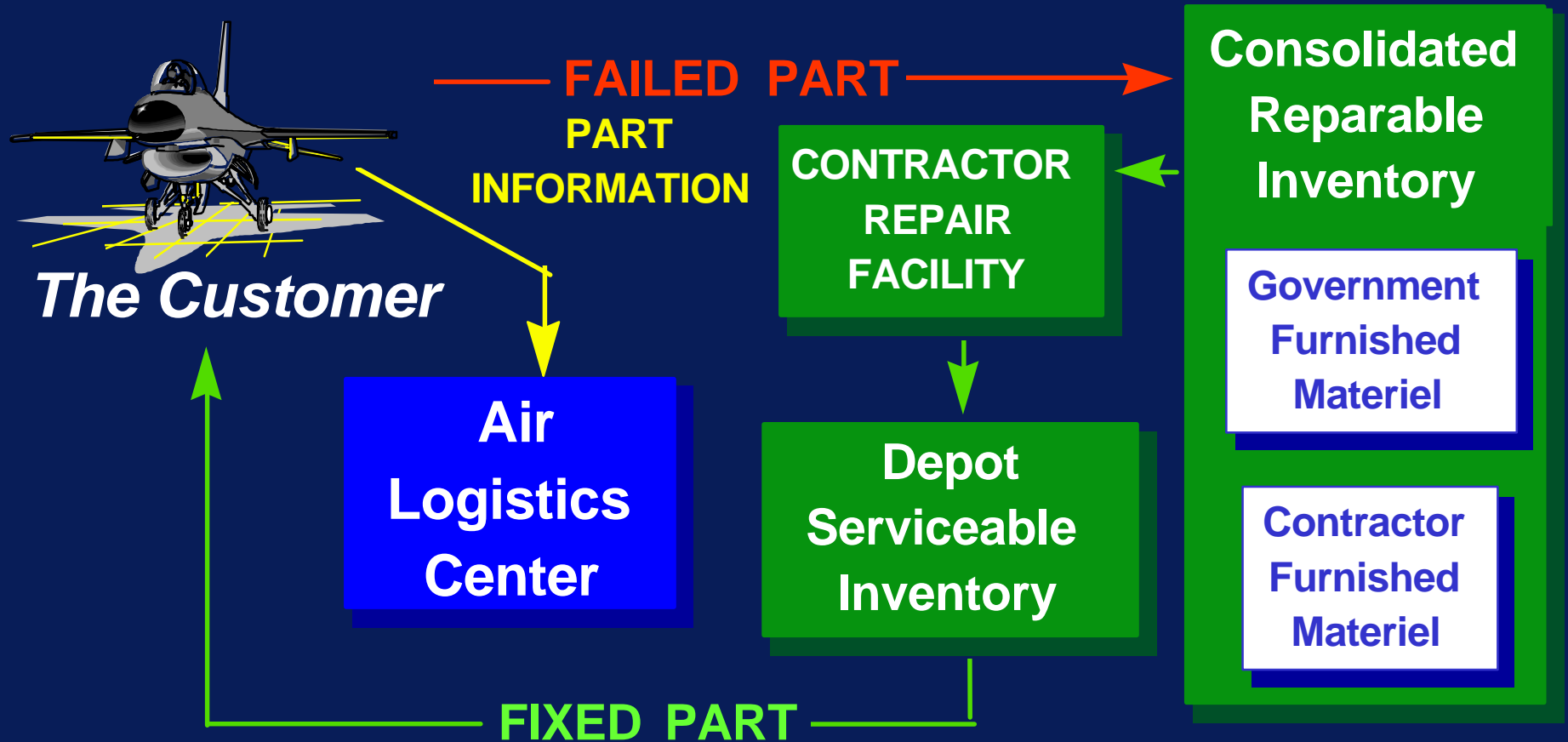
## Create Partnerships with Industry

**Long Term Contracts - Measure Success or Failure**

## Address a Variety of Contracts

**Use Multiple Vehicles - Use Integrated Team Approach**

# CREP PROCESS



# **CREP TENETS**

- **Long Term 3-5 Year Flexible Contracts**
- **Direct Shipment of Reparable Carcass To Contractor**
- **FAST Repair**
- **Contractor Responsible for Parts Support**
- **Prioritized Shipment Direct to Unit**

**EXPRESS PRIORITIZES REPAIR AND SHIPMENT**

# CREP RESULTS F-15 RADAR

## Getting it Started

Contract Repair  
Team Formed

Initial Lay-in of  
Long Lead Parts by USAF

Contractor ships  
via next day air (as required)

Inventory Maintained  
and Replenished by Contractor

## Benefits

Reduced Overall  
Cost 27% (\$1.67M to 1.22M)

Reduced Repair  
Turn-Time 66% (90 to 30 days)

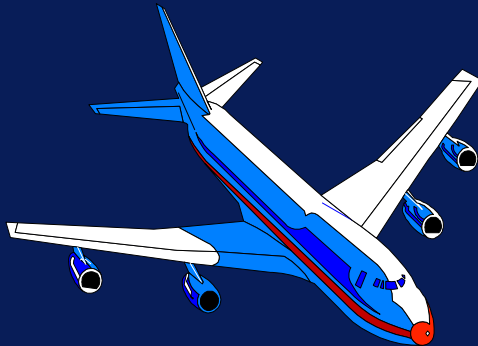
Deleted 12 hours  
Additional Testing

Eliminated Unneeded  
Data Collection (\$13.5K per Order)

Eliminated Unessential  
Data and Military Standards

# AIRCRAFT REPAIR ENHANCEMENT PROGRAM (AREP)

## Commercial Flow Times - “D” Checks



Boeing 747 “D” Check - 30 Days

## Depot Flow Times - PDM



F-15 PDM - 154 Days

C-130 PDM - 243 Days

C-141 PDM - 248 Days

# COMMERCIAL VRS DEPOT MANLOADING

## Commercial Manloading - “D” Checks

300 TO 500 HOURS  
WORK PER DAY



## Depot Manloading - PDM

200 TO 250 HOURS  
WORK PER DAY



# AREP

**IMPLEMENT LEAN AIRCRAFT SUSTAINMENT ENVIRONMENT TO  
IMPROVE AIRCRAFT AVAILABILITY TO THE CUSTOMER**

**REDUCE MATERIAL  
NEEDED TO SUPPORT PDM**

**REDUCE DEPOT  
FLOW DAYS**

**REDUCE AIRCRAFT  
INVENTORY**

## **AREP GOALS**

**DELIVER AIRCRAFT  
ON SCHEDULE**

**PROVIDE BEST  
VALUE TO CUSTOMER**

**IMPROVE USER AND  
SUPPLIER PARTNERSHIPS**

# AREP RESULTS

## 50% Flow Time Reductions

C-130

243 Days to 122 Days

F-15

154 Days to 77 Days

C-141

248 Days to 124 Days

## Aircraft Availability Increased

More Jets on the Ramp

Decreased Costs

Less Resources Tied Up in PDM



# AGILE LOGISTICS OBJECTIVES

- **Agile Combat Support**
  - **Reduce Flowdays 20% By FY2000/Additional 20% By FY2005**
  - **Reflect Users Real Requirement Vice Standard Flowdays**
  - **Meet End Item Delivery Commitments 90% of the time By FY2000/95% of the Time By FY2005**
- **Cost**
  - **Reduce Average Customer Price 7% By FY2005**
  - **Consolidate Core Capabilities to Remaining Depots By FY2001**
  - **Develop Partnerships with Industry to Improve Capacity Usage**
-

# AGILE LOGISTICS OBJECTIVES

- **Infrastructure**
  - **Define Facility/Equipment End State for FY2005**
  - **Divest Unneeded Infrastructure**
- **Workforce**
  - **Define FY2005 Workforce End State**
-

# SUMMARY

- **Great Emphasis on Improving Cycle Times**
- **Benefits**
  - **Repair Time Reductions = \$775M Spares Buy Reduction**
  - **Contract Time Reductions = Over \$300M**
  - **Increased System Availability**